ITS Technical Bulletin 221
CICS VERSION 4 RELEASE 1

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CICS Version 4 Release 1 has been generally available from IBM since October 1994. It has been installed in a systems test region at ITS since January 1995. The stability and integrity of this new version has been very good. The Database/CICS Support Group is planning a phased implementation of this new version, into production, before the next legislative session.

In order to assist the user community in reviewing their applications for this new version, the Database/CICS Support Group has outlined the highlights of CICS V4R1.

There are no major technical changes with CICS V4R1. Most of the changes are in the area of performance and reliability. In the migration to CICS V3R3, the major change was the elimination of macro code and the partial removal of system control block access. If your applications run under CICS V3R3 and use the standard interfaces to CICS, there will not be any conversion effort required on your part.

Following are CICS Version 4 Release 1 highlights.

CICS now has an external application interface. You may now write a batch program that can issue CICS commands to a running online region. This will enable users who have a limited batch window in which to perform utility functions, to run necessary utility jobs for their applications, without bringing down the online region. This new functionality goes beyond the capabilities of IPCP, a third party software product run at the State, where files are allocated and deallocated dynamically. The user now has at their disposal, virtually the full range of CICS calls that can be used in an online program.

No CICS control blocks are accessible for user manipulation, this should not be a surprise or a problem for the majority of applications as this was a feature that IBM partially implemented in CICS V3R3. If for some reason there are critical CICS control blocks or information that you cannot access, please contact the CICS systems support staff for a problem resolution. This change is designed to further reduce the instances of an application transaction causing CICS to hang or abend.

CICS has the ability to dynamically install programs and maps. This will be a positive move for those requiring table entries to be made by the system support staff. Under the new version, it will not be necessary to fill out forms to have programs or maps defined by ITS, CICS will automatically handle the install at call time. If you have a program that references control blocks for addresses of where programs are loaded, they will need to be reviewed. If you perform

application processing based on PGMIDERR, you may wish to review this code in light of the new autoinstall functionality.

It is now possible to attach security to transactions that are not associated with a terminal. This has been a long standing requirement that is filled in CICS V4R1. You may wish to review your security rules associated with non-terminal transactions.

There is additional access to system information via EXEC CICS commands.

CICS V4R1 now has the ability to isolate transactions from one another, in order to eliminate storage violation problems. Although this facility is available, it is advisable to activate this feature only in the CICS test regions. Due to the way old COBOL/VS application programs are linked, we are currently unable to activate storage protection for CICS regions. Storage protection prevents application programs from overwriting CICS control programs or control blocks. If you would like to use the transaction isolation facility, contact the CICS Support Group to discuss it.

CICS has a session manager that will help eliminate bottlenecks in TOR/AOR regions. CICS regions can recognize and respond to bottlenecks between heavily loaded CICS regions which are communicating with each other.

In conjunction with the new VTAM already in production, if a CICS region goes down for any reason, VTAM will hold onto the terminal connection for a period of time until the CICS region returns, this will mean that the amount of time a user will experience an elapsed outage will be greatly reduced since VTAM and CICS will not have to re- establish network connection and rebuild network control blocks.

CICS V4R1 in conjunction with the current version of MVS we run, has the ability to better manage the workload of a CICS region. MVS now has the capability to see into a CICS region, and can now prioritize the transactions within a CICS region. This will help the user community since critical transactions for a given CICS region can now be prioritized

With CICS V4R1 and the new external application interface (API), CICS becomes positioned to support the use of a standard client/server interface. At the present time CICS can support ONC/RPC (Open Network Computing/Remote Procedure Call) which is a widely used interface for client/server communication over TCP/IP networks.

CICS V4R1 will provide the foundation to build on parallel transaction processing. This is where many CICS physical regions appear as one logical region to the user. This provides higher availability and workload balancing than is currently available under our present configuration.

Schedules will be forwarded, detailing dates that CICS regions will convert to the new version. If you wish to test your applications on a CICS V4R1 system, please contact the CICS Support Group and we can provide directions on where to test your applications. If you have particular concerns, requirements or questions please e-mail them to cbase@email.state.ut.us, or

asdomain.asitmain(cbase). The CICS Support Group staff will respond as soon as possible.